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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,024	08/07/2001	Thane M. Larson	10012574-1	3021
7590 06/30/2004				
HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400			EXAMINER FLEMING, FRITZ M	
			ART UNIT 2182	PAPER NUMBER

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/924,024

Applicant(s)

LARSON ET AL.

Examiner

Fritz M Fleming

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

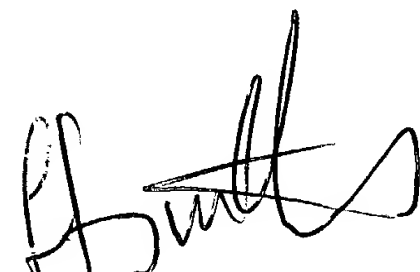
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.



FRITZ FLEMING  
PRIMARY EXAMINER  
GROUP 2100

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8-7-01 and 3-18-03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,7,9,14,are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Meir et al. (B-M) in view of Pignolet.

B-M clearly shows the majority of the claimed elements. Use is specified in switching hubs or concentrators, therefore not the same as the claimed "server system". It is to be noted that the claims are mainly devoid of server specific structure or functionality. Thus the difference in claimed subject matter is mainly one of semantic terminology and not structure. But since a switching hub or concentrator is not anticipatory of a "server system", an obviousness type rejection is made, relying upon a secondary reference for semantic terminology. Also, B-M uses the term "module" to describe the elements that are plugged into the backplane. For purposes of an obviousness rejection, the only difference, to the extent claimed, between a "module" and "card" is that of terminology, as the claims do not provide any structure that would distinguish a "module" of B-M from a card, as both are plugged into backplanes. In fact, applicants use the terminology "cards/modules 300A-G" at line 23 of page 3, making the equivalence of terminology, and hence proper obvious subject matter when it comes to B-M's "modules". Furthermore, please note the plurality of subsystems (10) that each include a non-volatile memory device (20) which include, but are not limited to, the amount of power each module requires for the respective power rails (i.e. col. 3, lines 58-65, which is the same as the claimed "power usage information"), and which are disclosed to be EEPROM 20 at column 9, line 22. Note also the use of a power supply unit(s) at 4, each of which use the status/type input 96 to tell the system the number and type of power supply elements, so a proper power budget can be formed (col. 7, lines 1-6). An RCM (redundant controller module) is coupled to the subsystems and power supplies via the backplane (i.e. col. 7, lines 24-44), so that the power usage data from

each managed module (10) is collected, from which, after an initial hub reset or powerup, an initial power budget is determined, based upon the data passed to the RCM via the 96 input regarding the type and capacity of each power supply. Then the RCM gathers the power usage information from each module (10) per columns 9-12, specifically mentioning column 11 and the RCM maintained power budget in the form of a running assessment used to determine if a slot containing a module (10—power disabled or hot inserted) can be safely power enabled. Thus what is lacking is the terminology “server system” and “server management card”, noting again, that the hub and RMC are the same, functionally speaking regarding the claimed limitations, as the “server system/management card”.

Pignolet in the same field of computer power management, shows a backplane/card/module-based data server (10) with a power management system (40), thus showing that data servers (i.e. server systems) are power managed.

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify B-M per the teachings of Pignolet so as to have a “server system” with a “server management card” in place of the hub and RMC, so as to be able to increase the types of computer equipment to benefit from the power management schemes of B-M, again noting that the limitations as claimed, only require a change in terminology, which is provided by Pignolet. Thus it would have been obvious to one having ordinary skill in the art, to apply the teachings of Pignolet to B-M in order to achieve a power managed, card based server system, as the benefits of power management of B-M are applicable to all card based computer systems.

As a computer system is taught, the method of operating such is rejected using the same rationale, as the structure discussed above operates in the analogous method. Hence the method steps are rendered obvious under the same analysis.

5. Claims 2-6, 10-13, 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over B-M in view of Pignolet as applied to claims 1, 7, 9, 14 above, and further in view of De Nicolo '666 (D-N).

As detailed above, B-M in view of Pignolet teach the bulk of what is claimed, save an explicit mention of the power supply unit(s) including an associated memory for storing the power capacity information, although some sort of equivalent is needed by B-M in order to properly calculate the power budget based upon the power supply inputs at 96.

Thus D-N supplies a technical basis for the required passing of power supply information, that being the use of power supply modules (18, 20, 22) which may have stored in it a relatively permanent memory having a three or more bit ID that can be read by the power supervisor 14 over link 16, which includes a code for the model and/or the maximum ability to supply power or current. See columns 2-3 in which a power budget is built up, based upon power supply unit ID. Also in column 3, each power supply module can have an EEPROM with power information to include output voltages, amongst other things.

Thus it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the combined teachings of B-M and Pignolet per the teachings of D-N for the express purpose of using an EEPROM in the power supply

units so as to provide power supply output information to a supervisory controller, and at the same time avoid reliance on software tables in the supervisory unit and to allow for subsequent creation of power supply modules, being rationale explicitly taught by D-N at column 3, lines 6-31. Thus in combination, the RMC will then obtain the power supply data from the power supply EEPROMs so as to create the power budget therefrom, wherein the power available from the power supplies is compared against the power required by the modules, such that the modules are selectively powered up based upon the overall power budget, as discussed in B-M in detail above. Again, of specific relevance in B-M is the decision to power up or not power up a managed module in column 11, lines 1-19.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over B-M in view of Pignolet as applied to claims 1,7,9,14 above, and further in view of Doustou, II et al. (Doustou).

B-M in view of Pignolet lack specific mention of the subassemblies containing at least one host processor card, at least one hard disk card, and at least one fan card.

Doustou, in the same art of computer and server structure, shows it is old and well known to use processor and disc modules, as well as fan packs in servers (i.e. column 1, lines 42-52). Note for example the disc module 139, processor modules 165 and fan modules 47.

Thus it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify B-M in view of Pignolet per the teachings of Doustou so as to have modules for specific server elements such as the processor, disk

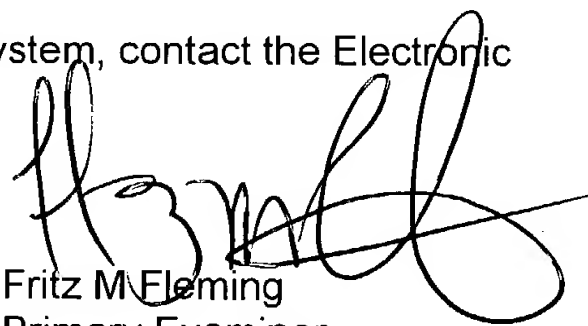


and fans, and to thereby benefit from the power management applied to such, as Doustou has clearly shown that the modular structure of such is old and well known in the server architecture art. The combination is further strengthened by applicants use of "card/module" thereby equating cards to modules, and thus enabling an obviousness type rejection, as the overall teachings apply to the power management of all cards and modules within a computer system, based upon the idea of an overall power budget.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 703-308-1483. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-1483. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fritz M Fleming  
Primary Examiner  
Art Unit 2182